

# Preface

The world coastline extends for about 356,000 km, and coastal areas account for more than 10 percent of the land surface in 123 countries around the world. India has a coastline of 8118 km, with an Exclusive Economic Zone (EEZ) of 2.02 million km<sup>2</sup> and a continental shelf area of 468,000 km<sup>2</sup>, spread across ten coastal States and seven Union Territories, including the islands of Andaman and Nicobar and of Lakshadweep. The coastal and marine ecosystem supports about 35 percent of the nation's human population, who depend on the rich exploitable coastal and marine resources.

Marine and coastal ecosystems of India provide supporting services in the form of a wide range of habitats. Marine ecosystems such as estuaries, coral reefs, marshes, lagoons, sandy and rocky beaches, mangrove forests and sea grass beds are all known for their high biological productivity, providing a wide range of habitats for many aquatic flora and fauna. The Indian coastal and marine ecosystem supports 17,795 species of fauna and flora, which is about 6.75 percent of global distribution. To protect these resources, the Government of India has declared 683 areas as National Parks, Wildlife Sanctuaries, Community Reserves and Conservation Reserves. In addition, 17 Biosphere Reserves have also been declared to protect entire ecosystems. A total of 885 species of marine fauna belonging to eight phyla—Porifera, Coelentrata, Arthropoda, Mollusca, Echinodermata, Pisces, Reptilia and Mammalia—were listed under different schedules of the Indian Wildlife (Protection) Act, 1972. Globally threatened marine and coastal bird species such as the spot-billed pelican, *Pelecanus philippensis*, and the lesser adjutant, *Leptoptilos javanicus*, are found in India. Important Birds Areas (IBAs) along coasts include the Gulf of Kachchh, Gulf of Mannar, Pulicat, Chilika Lake, etc. About 25 species of marine mammal are known to occur in Indian waters.

This volume contains 29 chapters detailing studies by reputed researchers working in the field of marine faunal communities of India. It is divided into two parts: "Marine Faunal Communities" and "Ecology and Conservation." The first covers a wide range of marine faunal communities—sponges, octocorals, molluscs, crabs, bryozoa, sea urchins, ascidians, fish, sea snakes, coastal and marine birds, mammals—and coastal and marine biodiversity in general. The second part deals with subjects such as DNA barcoding and molecular taxonomy of fish, potential exploitation of mangrove sediment bacteria to produce antibiotics, impact of anthropogenic activity and natural calamities on coral reefs,

faunal diversity and its conservation on shipwrecks, human–crocodile conflict, and conservation of marine and mangrove ecosystem fauna.

This book presents unique information on marine faunal diversity in India. We sincerely hope that it will be of great help to researchers and field scientists in the area of marine biodiversity in India and in other countries.

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The world's oceans cover about 71% of the Earth's surface and contain more than 95% of the world's water. The world's oceans are home to a vast array of life forms, including many species that are found nowhere else on Earth. The oceans are also a source of many of the world's most important resources, including food, medicine, and energy. However, the oceans are also under increasing pressure from human activities, including pollution, overfishing, and climate change. This book presents unique information on marine faunal diversity in India. We sincerely hope that it will be of great help to researchers and field scientists in the area of marine biodiversity in India and in other countries.

The book is divided into two main parts. The first part, "Marine Faunal Diversity in India," provides a comprehensive overview of the marine fauna of India, including the distribution of various groups of organisms, the diversity of life forms, and the threats to marine biodiversity. The second part, "Conservation of Marine Faunal Diversity in India," discusses the various measures that can be taken to protect and conserve the marine fauna of India, including the establishment of marine reserves, the implementation of sustainable fishing practices, and the reduction of pollution.

The book is written for a wide range of readers, including scientists, students, and the general public. It is written in a clear and concise style, and it includes many illustrations and photographs to help illustrate the various concepts discussed in the book. The book is also written in a way that is accessible to non-scientists, and it includes many examples of the various life forms that are found in the oceans.

The book is a valuable resource for anyone interested in marine biodiversity in India and in other countries. It provides a comprehensive overview of the marine fauna of India, and it discusses the various measures that can be taken to protect and conserve the marine fauna of India. The book is written in a clear and concise style, and it includes many illustrations and photographs to help illustrate the various concepts discussed in the book.